

Appl. No. 10/800,450
Amdt. Dated January 26, 2005
Reply to Office action of July 27, 2004

REMARKS/ARGUMENTS

Applicants would like to thank the Examiner for the careful consideration given the present application. Reconsideration of the application is respectfully requested in view of the remarks provided herein.

Claims 1-2 were rejected under 35 U.S.C. 102(c) as being anticipated by Bowers et al. (U.S. Patent No. 5,985,687). Traversal of this rejection is made for at least the following reasons. Bowers et al. does not disclose a "silicon block being covered by a silicon oxide layer" or "cleavage of the silicon block along the cleavage area to detach the surface layer fixed to the support from it, and thinning or respectively thickening the said surface layer until a thickness substantially equal to the said determined thickness, is obtained" as recited in claim 1. Rather, Bowers et al. teaches the use of InP, GaAs, and sapphire substrates and GaN and InN layers (Abstract; Fig. 1 and 2; and col. 3, line 60, to col. 4, line 19). There is no mention in Bowers et al. of using a silicon block or of a silicon block being covered by a silicon oxide layer.

Further, Bowers et al. discloses thinning of the sapphire substrate before the cleaving step to make the sapphire substrate thin enough for cleaving (col. 6, lines 11-21). Bowers et al. does not mention thinning of any substrate or layer after the cleaving step. Further still, Bowers et al. discloses a method for fabricating a cleaved facet along a vertical plane in GaN epitaxially films grown on sapphire, where the vertical plane is perpendicular to the sapphire surface (col. 1, lines 52-63; claim 1). The GaN layer with sapphire substrate is fused to a InP or GaAs substrate; the sapphire substrate is thinned; and then the InP/GaAs substrate is cleaved to produce the crystal facet parallel to the GaN layer (Abstract; col. 5, lines 26-33; claim 1). Therefore, Bowers et al. discloses cleaving of a substrate perpendicularly to the growth surface. Bowers et al. does not disclose cleaving substantially parallel to the growth surface.

Because Bowers et al. does not disclose each and every limitation set forth in independent claim 1, Bowers et al. cannot anticipate such claim, or claims 2-15, which depend therefrom. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Bowers et al. (U.S. Patent No. 5,985,687) in view of Ohmura et al. (U.S. Patent No. 4,848,272). Traversal of this rejection is made for at least the following reasons. Claim 3 depends from claim 1, which is believed to be allowable over Bowers et al. for the reasons discussed above. Ohmura et al. does not make up for the deficiencies of Bowers et al. Ohmura et al. merely

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discloses an apparatus for forming thin films such as a barrel type epitaxial growth apparatus. Accordingly, the combination of Bowers et al. and Ohmura et al. do not teach or suggest each and every limitation set forth in claim 3. Withdrawal of this rejection is respectfully requested.

Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Bowers et al. (U.S. Patent No. 5,985,687) in view of Bruel (U.S. Patent No. 5,374,564). Traversal of this rejection is made for at least the following reasons. Claim 4 depends from claim 1, which is believed to be allowable over Bowers et al. for the reasons discussed above. Bruel does not make up for the deficiencies of Bowers et al. Bruel merely discloses a process for producing thin semiconductor material films without requiring an initial substrate of a different nature from the chosen semiconductor, without requiring very high implantation doses, or an etch-stop. Accordingly, the combination of Bowers et al. and Bruel do not teach or suggest each and every limitation set forth in claim 4. Withdrawal of this rejection is respectfully requested.


Claims 5-15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ramdani et al. (U.S. Patent No. 5,835,521) in view of Bowers et al. (U.S. Patent No. 5,985,687). Traversal of this rejection is made for at least the following reasons. The Examiner concedes that Ramdani et al. fails to teach the formation of silicon layer, namely bonding a silicon block with a support, cleaving the silicon block and thinning the surface layer to a desired thickness. Accordingly, the Examiner relies on Bowers et al. in an attempt to make up for the deficiencies of Ramdani et al. However, as discussed above, using a silicon block or of a silicon block being covered by a silicon oxide layer is also absent from Bowers et al. In contrast, Bowers et al. discloses the use of InP, GaAs, and sapphire substrates and GaN and InN layers (Abstract; Fig. 1 and 2; and col. 3, line 60, to col. 4, line 19). For at least these reasons, the combination of Ramdani et al. and Bowers et al. fail to teach or suggest each and every limitation set forth in claims 5-15. Withdrawal of this rejection is respectfully requested.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

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If there are any additional fees resulting from this communication, please charge same
to our Deposit Account No. 16-0820, our Order No. 33019US1.

Respectfully submitted,
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